We claim:

1. ~~An illuminated wearable article comprising:~~

(a) a regular two-dimensional array of pixel display elements having a front, light-emitting side and an opposing, back side;

(b) a graphics controller physically coupled to and electrically connected to the array;

(c) a power source physically coupled to and electrically connected to the graphics controller and the array; and

~~(d) a fastener physically coupled to the back side of the array.~~

2. The article of claim 1 wherein the array has a width in pixels that is between one and five times the character pitch of a character set displayed on the array by the graphics controller.

3. The article of claim 1 wherein the array has a width in pixels that is between 1.1 and 2.0 times the character pitch of a character set displayed on the array by the graphics controller.

4. The article of claim 1 wherein the array has a width in pixels that is approximately 1.5 times the character pitch of a character set displayed on the array by the graphics controller.

5. The article of claim 1 further comprising a common substrate to which the elements (a)-(d) are mounted or connected.

6. The article of claim 5 wherein the substrate is a printed circuit board.

7. The article of claim 1 wherein the fastener has two positions, open and closed.

8. The article of claim 7 wherein the fastener is a safety pin.

9. The article of claim 7 wherein the fastener is configured so that the user cannot remove it from the substrate in either of the two positions.

10. The article of claim 5 wherein the substrate further has mounted thereon exactly two buttons electrically coupled to the graphics controller.

11. The article of claim 1 wherein the graphics controller is a control circuit configured by a computer program to display a user-selected sequence of patterns on the array.

12. The article of claim 11 wherein the control circuit is programmed to permit the user to select the sequence of patterns from among:

(a) members of an alphanumeric character set;

(b) graphical display elements; and

(c) animation frames.

13. The article of claim 12 further comprising exactly two buttons physically coupled to the array and electrically coupled to the graphics controller.

14. The article of claim 11 wherein the brightness of each pixel display element is controlled with pulse-width modulation.

15. The article of claim 14 wherein the control circuit has a non-volatile store for the user-selected sequence of patterns.

16. The article of claim 1 further comprising a programming connector physically coupled to the array and electrically connected to the graphics controller.

17. The article of claim 16 wherein the programming connector comprises a light-responsive transducer.

18. The article of claim 16 wherein the article lacks any user-manipulated buttons or switches except that the power source is removable and replaceable.

19. The article of claim 1 wherein the power source is removable and replaceable, and further comprising a programming connector physically coupleable to the array and electrically connectable to the graphics controller only when the power source is removed, whereby the circuit can be programmed without over-driving the power source.

20. The article of claim 1 wherein the pixel display elements are light-emitting diodes.

21. The article of claim 1 wherein those parts of the graphics controller and couplings that conduct current between the power source and the pixel array lack any resistor components.

22. An illuminated wearable article comprising:

(a) means for displaying a message;

(b) means for driving the display means to repeatedly scroll the user-selected message across the display means;

(c) means for powering the display means, the selection means, and the driving means; and

(d) means for attaching the display means, the selection means, the driving means, and the powering means, as a unit, to clothing.

23. The article of claim 22 wherein the display means has a width in pixels that is between one and two times the character pitch of characters displayed on the display means.

24. The article of claim 22 further comprising means for storing for selection an alphanumeric character set and means for selecting the message as a sequence of patterns from among a set of characters or graphic elements including:

(a) members of an alphanumeric character set;

(b) graphical display elements; and

(c) animation frames.

25. An illuminated wearable article comprising:

(a) a substrate having a front side and a back side and having mounted thereon:

(i) a regular two-dimensional array of pixel display elements emitting light away from the front side of the substrate,

(ii) a graphics controller electrically connected to the array;

(iii) a computer-readable storage medium storing a computer program to cause the control circuit to display a sequence of patterns on the array; and

(iv) a power source electrically connected to the control circuit and the array; and

(b) a fastener coupled to the back side of the substrate.

26. A method of programming a message comprising a sequence of patterns or characters into a wearable ornamental article having at least two buttons and a display, comprising, in order:

(a) when it is desired to alter a first character being displayed in a message being scrolled on the display, activating a first button combination

comprised of clicking at least one of the buttons, to toggle from a run mode to an edit mode;

(b) activating a second button combination comprised of clicking at least one of the buttons, while in the edit mode, to switch to the next value from a predetermined ordered character set;

(c) repeating part (b) until a desired first replacement character is shown; and

(d) activating a third button combination comprised of clicking at least one of the buttons, while in the edit mode, to toggle from the edit mode to the run mode, thereby causing the replacement of the first character by the first replacement character in the scrolled message being displayed.

27. The method of claim 26 further comprising, after part (c) and before part (d):

(a) activating a fourth button combination comprised of clicking at least one of the buttons, while in the edit mode, to select for alteration a second character being displayed after the first character; and

(b) repeating parts (b) and (c) to select a second replacement character;

(c) wherein part (d) also causes replacement of the second character by the second replacement character in the scrolled message being displayed.

28. The method of claim 26 further comprising, after part (a) and before part (d), activating a fifth button combination comprised of clicking at least one of the buttons, while in the edit mode, to change the entire character set to an alternate character set, wherein the character set consists at least primarily of alphanumeric characters and the alternate character set consists of graphic patterns.

29. The method of claim 27 further comprising, after part (a) and before part (d), activating a fifth button combination comprised of clicking at least one of the buttons, while in the edit mode, to change the entire character set to an alternate character set, wherein the character set consists at least primarily of alphanumeric characters and the alternate character set consists of graphic patterns, and wherein:

(a) the first button combination consists of clicking both buttons together while in run mode and the first character is a character that is being substantially displayed;

(b) the second button combination consists of clicking a first of the two buttons while in edit mode;

(c) the third button combination consists of clicking the second of the two buttons while in edit mode;

(d) the fourth button combination consists of double-clicking the second button while in edit mode; and

(e) the fifth button combination consists of clicking both buttons simultaneously while in edit mode.

30. An illuminated article useful as an ornament comprising:

(a) a case;

(b) a regular two-dimensional array of pixel display elements supported by the case and having a light-emitting side directed away from the case;

(c) a graphics controller supported by the case and electrically connected to the array; and

(d) a fastener physically coupled to the top of the case, whereby the case is suspended from the fastener.

31. The article of claim 30 wherein the array has a width in pixels that is between one and five times the character pitch of a character set displayed on the array by the graphics controller.

32. The article of claim 30 wherein the array has a width in pixels that is between 1.1 and 2.0 times the character pitch of a character set displayed on the array by the graphics controller.

33. The article of claim 30 wherein the array has a width in pixels that is approximately 1.5 times the character pitch of a character set displayed on the array by the graphics controller.

34. The article of claim 30 wherein the fastener is a flexible loop.

35. The article of claim 30 wherein the graphics controller is a control circuit configured by a computer program to display a user-selected sequence of patterns on the array.

36. The article of claim 35 wherein the control circuit is programmed to permit the user to select the sequence of patterns from among:

(a) members of an alphanumeric character set;

(b) graphical display elements; and

(c) animation frames.

37. The article of claim 36 further comprising exactly two buttons physically coupled to the array and electrically coupled to the graphics controller.

38. The article of claim 35 wherein the brightness of each pixel display element is controlled with pulse-width modulation.

39. The article of claim 30 further comprising a second regular two-dimensional array of pixel display elements supported by the case and having a light-emitting side directed away from the case and in a different direction from the first array.

40. The article of claim 39 wherein the first and second arrays are controlled by a common set of exactly two buttons supported by the case and electrically coupled to the graphics controller.

41. The article of claim 40 wherein the first and second arrays are controlled by a single graphics controller.

42. The article of claim 40 further comprising a second graphics controller coupled to the second array.

43. The article of claim 40 further comprising a synchronizing interface coupled to the first and second arrays.

44. The article of claim 39 wherein the case is essentially two-sided with the two arrays facing in opposite directions.

45. The article of claim 39 wherein the case is essentially cubical.

46. The article of claim 45 further comprising third and fourth regular two-dimensional array of pixel display elements supported by the case and having a light-emitting side directed away from the case, wherein the four arrays are directed away from

the four different sides of the cubical case, and wherein the fastener is affixed to the top of the cubical case.

47. The article of claim 30 further comprising a power converter supported by the case, and wherein the case does not support a power source.

48. The article of claim 47 wherein the power converter produces three-volt direct current from a string of Christmas tree lights.

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